



What's New

INSTRUMENTATION

Tilt Level Controls Indicate Dry Bulk Material Level

These tilt level control units have rugged cast aluminum housings with LED indicator lights to alert the operator of the presence or absence of material. The surface-mount PC board is resistant



to shock and vibration and has a logic selector switch and adjustable time delay. Probes are offered in a 6-in. size for small bins and hoppers and a 9-in. size for abrasive applications. The instrument now allows for up to 5,000 ft of cable between the control unit and probe, so the control unit can be placed in an easily accessible area. Three models are available. The Model CT-105 control unit is NEMA Type 4- and 4X-approved for use in outdoor applications. The Model CT-106 has a NEMA Type 9 Class II, Groups E, F, and G rating for use in hazardous locations. The Model CT-107 control unit is explosionproof and carries a NEMA Type 7 Class I, Groups C and D rating for use in hazardous locations.

Conveyor Components Co.

www.conveyorcomponents.com

Automated Pipe-Profiling System Makes Complex Pipe Cuts Easy

This family of portable, computer-numerical-control (CNC) profiling machines automates pipe profiling and eases complex pipe cuts. Using a simple icon-driven computer interface and an intuitive onscreen selection guide, users can accurately create straight cuts, miters, saddles, holes, and special shapes, including complex configurations that typically take hours to cut and grind by hand, in a matter of minutes. Depending on the model, the machines can handle pipe diameters from 1.5 in. to 12 in. The system operates on any laptop computer that runs the Windows 7 or 8 operating system, and requires only a 115-V or 230-V electrical connection, so the welding machine can power it.



Mathey Dearman

www.matheycnc.com

Sensor Provides Noncontact Level Measurement in Bins

The RL level sensor provides reliable bin level data in challenging environments where dust levels are extremely high, such as during filling and emptying cycles. It uses acoustics-based technology at very low frequencies, which allows it to penetrate dust, and it features a self-cleaning, nonstick surface that does not require routine maintenance or an air purge for cleaning. The noncontact, continuous level sensor works in all powders and solids, including very-low-dielectric materials. The sensor outputs a 4–20-mA analog signal for connection to an existing control system or display module. A quick-start guide enables users to configure the RL directly from a screen on the head of the device, or from a PC. Users can view measurement data for one bin or all bins at once from a PC when the RL is used with MultiVision software.



BinMaster

www.binmaster.com

Temperature Compensation Increases Accuracy of Water Cut Monitor

Temperature compensation has been added to the Universal IV CM water cut monitor to improve its reliability and accuracy in the low-water-content ranges (0–1%, 0–5%, 0–10%, and 0–30% water) at temperatures up to 160°F. Its unique Perm-A-Seal sensing element can be installed directly in a main process line without the need for spool pieces, side arms, or slipstreams, and its Cote-Shield technology helps maintain accuracy despite coating buildup on the probe. The sensing element takes an average of the capacitive property of the fluid over its entire length, which ensures an accurate measurement. The Universal IV has an LCD display and keypad. It can be configured for NPT or flanged mountings and can be installed in all common pipe diameters.



Ametek, Inc.

www.ametek.com

Sulfide Analyzer Helps Control Odor and Reduces Maintenance Costs

The SMS-22 system uses a sulfide ion selective electrode (ISE) to measure the total amount of sulfide present in a sample. ISE-based technology offers measurement ranges up to 500 ppm using economical, easily replaceable electrode cartridges. Because sulfide ions only exist at high pH, the analyzer executes a multistep testing procedure. It conditions the sample, measures the sulfide ions, neutralizes the sample, measures the pH, and drains and rinses the sample cell, discharging a sample with a safe pH near 8. The SMS-22 is a sequential sampling analyzer, with sample timing that is easily adjustable from two samples per hour to 10 samples per hour. Its 4–20-mA output displays the total sulfide-ion content as well as the pH value. The rugged enclosure provides IP66 protection and is rated NEMA 4X.



Electro-Chemical Devices (ECD)

www.ecdi.com

Spectrometer Offers Nondestructive Analysis in Seconds

The PAT-IR is a mid-infrared, compact spectrometer that can be fiber-optically coupled to a reactor to measure and analyze chemical or biological reactions in laboratory and process environments. Its permanently aligned Bruker Rock-Solid interferometer and Digitect detector electronics ensure high-quality spectra, even under the harshest conditions. Fiber-optic probes enable *in situ* measurements, and a wide range of probes, such as the patented diamond ATR probe with MIR-silver halide fibers, can be attached to the unit. With the automated, built-in multiplexer, a single instrument can monitor up to six reactions.

HEL Group

www.helgroup.com

OPERATIONS AND MAINTENANCE

Two-Way Radio Does Not Require Licensing

The PT-150M professional-grade, portable two-way radio saves users the hassle and expense of licensing associated with FCC Part 90 business-band radio frequencies. It features 8-channel capacity, which allows maximum use of all five multi-use radio service (MURS) frequencies and reuse of three frequencies for additional work groups. It

operates at 2 W and has a 1,000-mW speaker that provides clarity and volume in noisy environments. The radio has a slim, lightweight design that is ergonomic and easy to carry and use. The seven-character alphanumeric display has easy-to-read icons that show battery status, channel, and keypad



lock; nine programmable function buttons provide advanced features such as radio configuration. Each radio comes with an antenna, a lithium-ion battery, a spring-action belt clip, a drop-in charging stand, and an AC adapter.

Ritron, Inc.

www.ritron.com

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Loading Platform Facilitates Safer and More Efficient Railcar Loading

Featuring a safety cage that protects the operator from falls, the Portable Transloading Platform provides safe, mobile access for rail-to-truck and truck-to-rail loading operations. The system can utilize a multitude of



hoses and loading arms to transfer products from one vehicle to another. The platform can be designed for double-sided operation for maximum flexibility, and can be customized to allow access to two rolling vehicles simultaneously. Available accessories include a trailer package, loading arms, hose handlers, pump and metering systems, electrical grounding, lighting packages, and safety showers, among others.

Benko Products

www.benkoproducts.com

RFID System Tracks Components Subject to Gamma Irradiation

The GammaTag radio-frequency identification (RFID) system tracks bags, vessel liners, filters, medical devices, and other pharmaceutical or biological devices that require gamma irradiation for sterilization purposes. Gamma-stable tags and labels — which are unaffected by gamma and other types of ionizing radiation — are attached directly to components, and work with RFID reader-writers to electronically identify and track the tagged components. The system increases patient safety, improves inventory visibility, and protects against counterfeiting. The technology has recently been awarded a U.S. patent (No. 8,519,846).

NewAge Industries, Inc.

www.newageindustries.com

ENVIRONMENTAL, HEALTH, AND SAFETY

Toxic-Gas Detector Receives IECEx Approval

With all of its electronics contained in an explosionproof housing, the TS4000H intelligent toxic-gas detector is now IECEx-approved for explosive environments. It can monitor a wide variety of hazardous industrial gases, such as ammonia, carbon monoxide, chlorine, hydrogen, hydrogen chloride, nitric oxide, ozone, and sulfur dioxide, among others, and can safeguard against oxygen deficiency. The detector offers event logging, has



a sensor-life indicator, and can self-calibrate. It is compatible with the HART communications protocol for uniform and consistent communication without disturbing the integrity of the 4–20-mA analog signal, and is also available in a Modbus configuration. The detector is easy to install and is suitable for applications in petrochemical plants, oil and gas facilities, water and wastewater treatment sites, and power stations.

General Monitors

www.generalmonitors.com

Fire Shelters Protect Critical Safety Equipment

These fire-resistant shelters have a patented design that maintains contained equipment below 60°C for 90 min, even during hydrocarbon fires that



exceed 1,000°C. They require no maintenance and are impervious to a wide range of corrosive chemicals, including salts, sulfur dioxide, and acid gases. The 1709 model is capable of protecting valves and actuators in the emergency-shutdown and fire-fighting systems of refineries, chemical plants, and offshore oil and gas platforms. The shelters can also be used to separate hazardous and nonhazardous areas of ships and offshore drilling platforms.

Intertec

www.intertec.info

Monitor Detects Inhalable Dusts Over a Wide Measurement Range

The CEL-712 Microdust Pro is a real-time, handheld dust monitor that uses a laser-diode-based light-scattering sensor to instantly detect dangerous concentrations of airborne particles and aerosols in the workplace. It is suitable for spot checks and walkthrough surveys, as well as continuous monitoring, for example, of material-handling processes to capture release events such as bag breaks. It can also be paired with a cyclone, filter cassette, and sample pump for size-selective or gravimetric monitoring. The device has a wide measurement range of 0.001–25,000 mg/m³, and it can be zero- and span-calibrated in the field. A detachable probe is available to help safely reach into breathing zones, small spaces, and ducts. The Microdust Pro features an intuitive icon-driven interface to help users navigate through its functions.



Casella CEL, Inc.

www.casellausa.com



Safety Products are Designed to Fit Women

The GirlzGear line of safety products consists of protective eyewear and helmets designed specifically for women. All GirlzGear eyewear meets the American National Standards Institute (ANSI) Z87.1+ high-impact standard, and the helmets meet the ANSI Z89.1 impact standard. The safety glasses feature a variety of lens and frame color combinations, and are 10% smaller than the company's traditional models to provide a more comfortable fit for narrower faces. The Serpent safety helmet is exceptionally lightweight, with a rotating ratchet adjustment system for a comfortable, customized fit, and is available in more than 10 colors.



Gateway Safety

www.gatewayssafety.com

FLUIDS AND SOLIDS HANDLING

Ductless Fume Hood Offers a High Level of Operator Protection

The Purair 5 ductless fume hood provides operator protection that exceeds U.S. Occupational Safety and Health Administration (OSHA) and American National Standards Institute (ANSI) standards. Three models are available, with widths of 24 in., 36 in., or 48 in. The units operate at low noise levels, and because they recirculate air, they do not exhaust conditioned or heated air into the atmosphere. A face velocity of 100 ft/min ensures containment of fumes and particulates for operator protection. An alarm alerts the operator when the airflow falls to an unacceptable level. The ductless unit can be placed on any bench top, and an optional polypropylene spillage tray can be provided when required. The rear of the unit has lighting to illuminate the work surface. The main filter can be chosen from 14 different styles, including specialty media for organic, solvent, acid, mercury, and formaldehyde vapors; high-efficiency particulate air (HEPA) filters are also available.



Air Science USA

www.airscience.com

Booster Pumps Feature an Innovative Hydraulic Design

The VR Series vertical multistage booster pumps have an integral heavy-duty bearing that helps minimize axial thrust, without the need for high-thrust motors. They have a temperature range of -5°F to 250°F, and are constructed of Type 316 stainless steel for corrosion resistance. Rated for 0.75–10 hp, the VR Series is available for flows of 8 to 60 gpm and can deliver up to 750 ft total dynamic head (TDH). The pumps are suitable for applications such as water supply and treatment, reverse osmosis, pressure boosting, and fire-suppression systems, among others.



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